

SEQUENCE LISTING

<110> Field, Loren J.
Tsai, Shih-Chong

<120> P193 PROTEINS AND NUCLEIC ACIDS, AND USES THEREOF

<130> IU99-PCT

<140> Not Yet Known

<141> 2000-08-23

<150> 60/150,266

<151> 1999-08-23

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<170> PatentIn Ver. 2.1

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1741

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1789

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1933

Pro Glu Gly Glu Val Leu Val Glu Leu Glu Gln Ala Leu Gly Ser Glu
610 615 620

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1981

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625 630 635 640

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2173

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690 695 700

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Asp Met Val Ser Lys Cys Glu Lys His Ala His Leu Tyr Arg Lys Leu
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				820					825					830		
agc	agg	ctg	acg	gac	cgc	aac	ccc	aag	acc	tac	tgg	gag	tcc	agt	ggc	
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2701	Ile	Arg	Gln	Leu	Thr	Leu	Leu	Val	Ala	Gly	Glu	Asp	Ser	Ser	Tyr	Met
				865					870					875		
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2749	Pro	Ala	Trp	Val	Val	Val	Cys	Gly	Gly	Asn	Ser	Ile	Lys	Ser	Val	Asn
				885					890					895		
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2845	Leu	Leu	Glu	Asn	Leu	Thr	Arg	Phe	Trp	Pro	Ile	Ile	Gln	Ile	Arg	Ile
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				930					935					940		
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2941	Val	Leu	Gly	Pro	Lys	Pro	Thr	Phe	Trp	Pro	Val	Phe	Arg	Glu	Gln	Leu
				945					950					955		
tgc	cgg	cac	acg	cgc	ctc	ttc	tac	atg	gtt	cgg	gcc	cag	gca	tgg	agt	
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cta	aat	ggg	gct	ctg	cgc	cat	gaa	cag	aat	ttt	gca	gag	cgc	ttc	ctt	
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3901

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 50 55 60
 Leu Leu Trp Met Ser Asp Asp Glu Ile Tyr Ala Asn Cys His Lys Met
 65 70 75 80
 Leu Gly Glu Asn Gly Gln Val Ile Ala Pro Ser Arg Glu Ser Thr Glu
 85 90 95
 Ala Gly Ala Leu Asp Lys Ser Val Leu Gly Glu Met Glu Thr Asp Val
 100 105 110
 Lys Ser Leu Ile Gln Arg Ala Leu Arg Gln Leu Glu Glu Cys Val Gly
 115 120 125
 Thr Val Pro Pro Ala Pro Leu His Thr Val His Val Leu Ser Ala
 130 135 140
 Tyr Ala Ser Ile Glu Pro Leu Thr Gly Ile Phe Lys Asp Arg Arg Val
 145 150 155 160
 Val Asn Leu Leu Met His Met Leu Ser Ser Pro Asp Tyr Gln Ile Arg
 165 170 175
 Trp Ser Ala Gly Arg Met Ile Gln Ala Leu Ser Ser His Asp Ala Gly
 180 185 190
 Thr Arg Thr Gln Ile Leu Leu Ser Leu Ser Gln Gln Glu Ala Ile Glu
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 Lys His Leu Asp Phe Asp Ser Arg Cys Ala Leu Leu Ala Leu Phe Ala
 210 215 220
 Gln Ala Thr Leu Thr Glu His Pro Met Ser Phe Glu Gly Val Gln Leu
 225 230 235 240
 Pro Gln Val Pro Gly Arg Leu Leu Phe Ser Leu Val Lys Arg Tyr Leu
 245 250 255
 His Val Thr Phe Leu Leu Asp Arg Leu Asn Gly Asp Ala Gly Asp Gln
 260 265 270
 Gly Ala Gln Asn Asn Phe Ser Pro Glu Glu Leu Asn Val Gly Arg Gly
 275 280 285
 Arg Leu Glu Leu Glu Phe Ser Met Ala Met Gly Thr Leu Ile Ser Glu
 290 295 300

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 Met Val Gly Glu Leu Arg Tyr Arg Glu
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 Phe Arg Val Pro Leu Gly Pro Gly Leu His Ala Tyr Pro Asp Glu Leu
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Ile Arg Gln Arg Val Gly His Asp Gly His Pro Glu Tyr Gln Ile Arg	
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5057
Gln Val Leu Ser Tyr Ala Val Pro Val Thr Val Met Glu Pro His Thr
1645 1650 1655

gag tcc ctg aac cca ggc tcc tca ggc ccc aac cca ccc ctc acc ttc
5105
Glu Ser Leu Asn Pro Gly Ser Ser Gly Pro Asn Pro Pro Leu Thr Phe
1660 1665 1670

cat acc cta cag att cgc tcc cgg ggt gtg ccc tat gcc tcc tgc act
5153
His Thr Leu Gln Ile Arg Ser Arg Gly Val Pro Tyr Ala Ser Cys Thr
1675 1680 1685

gcc acc cag agc ttc tct acc ttc cgg tag ccctagactt ggggtcaggg
5203
Ala Thr Gln Ser Phe Ser Thr Phe Arg
1690 1695

gaaggtagag ctggagcttt tacagaaatt aaacccaaga gtttgattat
5253

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<212> PRT
<213> Homo sapiens

<400> 4
Met Val Gly Glu Leu Arg Tyr Arg Glu Phe Arg Val Pro Leu Gly Pro
1 5 10 15
Gly Leu His Ala Tyr Pro Asp Glu Leu Ile Arg Gln Arg Val Gly His
20 25 30
Asp Gly His Pro Glu Tyr Gln Ile Arg Trp Leu Ile Leu Arg Arg Gly
35 40 45
Asp Glu Gly Asp Gly Gly Ser Gly Gln Val Asp Cys Lys Ala Glu His
50 55 60
Ile Leu Leu Trp Met Ser Lys Asp Glu Ile Tyr Ala Asn Cys His Lys
65 70 75 80
Met Leu Gly Glu Asp Gly Gln Val Ile Gly Pro Ser Gln Glu Ser Ala

					85					90					95
Gly	Glu	Val	Gly	Ala	Leu	Asp	Lys	Ser	Val	Leu	Glu	Glu	Met	Glu	Thr
			100					105					110		
Asp	Val	Lys	Ser	Leu	Ile	Gln	Arg	Ala	Leu	Arg	Gln	Leu	Glu	Glu	Cys
		115					120					125			
Val	Gly	Thr	Ile	Pro	Pro	Ala	Pro	Leu	Leu	His	Thr	Val	His	Val	Leu
	130					135					140				
Ser	Ala	Tyr	Ala	Ser	Ile	Glu	Pro	Leu	Thr	Gly	Val	Phe	Lys	Asp	Pro
145					150					155					160
Arg	Val	Leu	Asp	Leu	Leu	Met	His	Met	Leu	Ser	Ser	Pro	Asp	Tyr	Gln
				165					170					175	
Ile	Arg	Trp	Ser	Ala	Gly	Arg	Met	Ile	Gln	Ala	Leu	Ser	Ser	His	Asp
			180					185					190		
Ala	Gly	Thr	Arg	Thr	Gln	Ile	Leu	Leu	Ser	Leu	Ser	Gln	Gln	Glu	Ala
		195					200					205			
Ile	Glu	Lys	His	Leu	Asp	Phe	Asp	Ser	Arg	Cys	Ala	Leu	Leu	Ala	Leu
	210					215					220				
Phe	Ala	Gln	Ala	Thr	Leu	Ser	Glu	His	Pro	Met	Ser	Phe	Glu	Gly	Ile
225					230					235					240
Gln	Leu	Pro	Gln	Val	Pro	Gly	Arg	Val	Leu	Phe	Ser	Leu	Val	Lys	Arg
				245					250					255	
Tyr	Leu	His	Val	Thr	Ser	Leu	Leu	Asp	Gln	Leu	Asn	Asp	Ser	Ala	Ala
			260					265					270		
Glu	Pro	Gly	Ala	Gln	Asn	Thr	Ser	Ala	Pro	Glu	Glu	Leu	Ser	Gly	Glu
		275					280					285			
Arg	Gly	Gln	Leu	Glu	Leu	Glu	Phe	Ser	Met	Ala	Met	Gly	Thr	Leu	Ile
	290					295					300				
Ser	Glu	Leu	Val	Gln	Ala	Met	Arg	Trp	Asp	Gln	Ala	Ser	Asp	Arg	Pro
305				310						315					320
Arg	Ser	Ser	Ala	Arg	Ser	Pro	Gly	Ser	Ile	Phe	Gln	Pro	Gln	Leu	Ala
			325						330					335	
Asp	Val	Ser	Pro	Gly	Leu	Pro	Ala	Ala	Gln	Ala	Gln	Pro	Ser	Phe	Arg
			340					345					350		
Arg	Ser	Arg	Arg	Phe	Arg	Pro	Arg	Ser	Glu	Phe	Ala	Ser	Gly	Asn	Thr
		355					360					365			
Tyr	Ala	Leu	Tyr	Val	Arg	Asp	Thr	Leu	Gln	Pro	Gly	Met	Arg	Val	Arg
	370					375					380				
Met	Leu	Asp	Asp	Tyr	Glu	Glu	Ile	Ser	Ala	Gly	Asp	Glu	Gly	Glu	Phe
385				390						395					400
Arg	Gln	Ser	Asn	Asn	Gly	Val	Pro	Pro	Val	Gln	Val	Phe	Trp	Glu	Ser
			405						410					415	
Thr	Gly	Arg	Thr	Tyr	Trp	Val	His	Trp	His	Met	Leu	Glu	Ile	Leu	Gly
			420					425					430		
Phe	Glu	Glu	Asp	Ile	Glu	Asp	Met	Val	Glu	Ala	Asp	Glu	Tyr	Gln	Gly
		435													

610	615	620
Val Glu Gly Tyr Gly Pro	Ala Gly Lys Ile Leu	Leu Asp Leu Glu Gln
625	630	635
Ala Leu Ser Ser Glu Thr	Gln Glu Asn Lys Val	Lys Pro Leu Leu
	645	650
Leu Gln Leu Gln Arg Gln	Pro Gln Pro Phe Leu	Ala Leu Met Gln Ser
	660	665
Leu Asp Thr Pro Glu Thr	Asn Arg Thr Leu His	Leu Thr Val Leu Arg
	675	680
Ile Leu Lys Gln Leu Val	Asp Phe Pro Glu Ala	Leu Leu Leu Pro Trp
	690	695
His Glu Ala Val Asp Ala	Cys Met Ala Cys Leu	Arg Ser Pro Asn Thr
705	710	715
Asp Arg Glu Val Leu Gln	Glu Leu Ile Phe Leu	His Arg Leu Thr
	725	730
Ser Val Ser Arg Asp Tyr	Ala Val Val Leu Asn	Gln Leu Gly Ala Arg
	740	745
Asp Ala Ile Ser Lys Ala	Leu Glu Lys His Leu	Gly Lys Leu Glu Leu
	755	760
Ala Gln Glu Leu Arg Asp	Met Val Phe Lys Cys	Glu Lys His Ala His
	770	775
Leu Tyr Arg Lys Leu Ile	Thr Asn Ile Leu Gly	Gly Cys Ile Gln Met
785	790	795
Val Leu Gly Gln Ile Glu	Asp His Arg Arg Thr	His Arg Pro Ile Asn
	805	810
Ile Pro Phe Phe Asp Val	Phe Leu Arg Tyr Leu	Cys Gln Gly Ser Ser
	820	825
Val Glu Val Lys Glu Asp	Lys Cys Trp Glu Lys	Val Glu Val Ser Ser
	835	840
Asn Pro His Arg Ala Ser	Lys Leu Thr Asp His	Asn Pro Lys Thr Tyr
	850	855
Trp Glu Ser Asn Gly Ser	Ala Gly Ser His Tyr	Ile Thr Leu His Met
865	870	875
Arg Arg Gly Ile Leu Ile	Arg Gln Leu Thr Leu	Leu Val Ala Ser Glu
	885	890
Asp Ser Ser Tyr Met Pro	Ala Arg Val Val Cys	Gly Gly Asp Ser
	900	905
Thr Ser Ser Leu His Thr	Glu Leu Asn Ser Val	Asn Val Met Pro Ser
	915	920
Ala Ser Arg Val Ile Leu	Leu Glu Asn Leu Thr	Arg Phe Trp Pro Ile
	930	935
Ile Gln Ile Arg Ile Lys	Arg Cys Gln Gln Gly	Ile Asp Thr Arg
945	950	955
Ile Arg Gly Leu Glu Ile	Leu Gly Pro Lys Pro	Thr Phe Trp Pro Val
	965	970
Phe Arg Glu Gln Leu Cys	Arg His Thr Arg Leu	Phe Tyr Met Val Arg
	980	985
Ala Gln Ala Trp Ser Gln	Asp Met Ala Glu Asp	Arg Arg Ser Leu Leu
	995	1000
His Leu Ser Ser Arg Leu	Asn Gly Ala Leu Arg	Gln Glu Gln Asn Phe
1010	1015	1020
Ala Asp Arg Phe Leu Pro	Asp Asp Glu Ala Ala	Gln Ala Leu Gly Lys
1025	1030	1035
Thr Cys Trp Glu Ala Leu	Val Ser Pro Val Val	Gln Asn Ile Thr Ser
	1045	1050
Pro Asp Glu Asp Gly Ile	Ser Pro Leu Gly Trp	Leu Leu Asp Gln Tyr
	1060	1065
Leu Glu Cys Gln Glu Ala	Val Phe Asn Pro Gln	Ser Arg Gly Pro Ala
	1075	1080
Phe Phe Ser Arg Val Arg	Arg Leu Thr His Leu	Leu Val His Val Glu
	1090	1095
Pro Cys Glu Ala Pro Pro	Pro Val Val Ala Thr	Pro Arg Pro Lys Gly
1105	1110	1115
Arg Asn Arg Ser His Asp	Trp Ser Ser Leu Ala	Thr Arg Gly Leu Pro
	1125	1130
Ser Ser Ile Met Arg Asn	Leu Thr Arg Cys Trp	Arg Ala Val Val Glu

1140	1145	1150
Lys Gln Val Asn Asn Phe Leu Thr Ser Ser Trp Arg Asp Asp Asp Phe		
1155	1160	1165
Val Pro Arg Tyr Cys Glu His Phe Asn Ile Leu Gln Asn Ser Ser Ser		
1170	1175	1180
Glu Leu Phe Gly Pro Arg Ala Ala Phe Leu Leu Ala Leu Gln Asn Gly		
1185	1190	1195
Cys Ala Gly Ala Leu Leu Lys Leu Pro Phe Leu Lys Ala Ala His Val		
1205	1210	1215
Ser Glu Gln Phe Ala Arg His Ile Asp Gln Gln Ile Gln Gly Ser Arg		
1220	1225	1230
Ile Gly Gly Ala Gln Glu Met Glu Arg Leu Ala Gln Leu Gln Gln Cys		
1235	1240	1245
Leu Gln Ala Val Leu Ile Phe Ser Gly Leu Glu Ile Ala Thr Thr Phe		
1250	1255	1260
Glu His Tyr Tyr Gln His Tyr Met Ala Asp Arg Leu Leu Gly Val Val		
1265	1270	1275
Ser Ser Trp Leu Glu Gly Ala Val Leu Glu Gln Ile Gly Pro Cys Phe		
1285	1290	1295
Pro Asn Arg Leu Pro Gln Gln Met Leu Gln Ser Leu Ser Thr Ser Lys		
1300	1305	1310
Glu Leu Gln Arg Gln Phe His Val Tyr Gln Leu Gln Gln Leu Asp Gln		
1315	1320	1325
Glu Leu Leu Lys Leu Glu Asp Thr Glu Lys Lys Ile Gln Val Gly Leu		
1330	1335	1340
Gly Ala Ser Gly Lys Glu His Lys Ser Glu Lys Glu Glu Ala Gly		
1345	1350	1355
Ala Ala Ala Val Val Asp Val Ala Glu Gly Glu Glu Glu Glu Glu		
1365	1370	1375
Asn Glu Asp Leu Tyr Tyr Glu Gly Ala Met Pro Glu Val Ser Val Leu		
1380	1385	1390
Val Leu Ser Arg His Ser Trp Pro Val Ala Ser Ile Cys His Thr Leu		
1395	1400	1405
Asn Pro Arg Thr Cys Leu Pro Ser Tyr Leu Arg Gly Thr Leu Asn Arg		
1410	1415	1420
Tyr Ser Asn Phe Tyr Asn Lys Ser Gln Ser His Pro Ala Leu Glu Arg		
1425	1430	1435
Gly Ser Gln Arg Arg Leu Gln Trp Thr Trp Leu Gly Trp Ala Glu Leu		
1445	1450	1455
Gln Phe Gly Asn Gln Thr Leu His Val Ser Thr Val Gln Met Trp Leu		
1460	1465	1470
Leu Leu Tyr Leu Asn Asp Leu Lys Ala Val Ser Val Glu Ser Leu Leu		
1475	1480	1485
Ala Phe Ser Gly Leu Ser Ala Asp Met Leu Asn Gln Ala Ile Gly Pro		
1490	1495	1500
Leu Thr Ser Ser Arg Gly Pro Leu Asp Leu His Glu Gln Lys Asp Ile		
1505	1510	1515
Pro Gly Gly Val Leu Lys Ile Arg Asp Gly Ser Lys Glu Pro Arg Ser		
1525	1530	1535
Arg Trp Asp Ile Val Arg Leu Ile Pro Pro Gln Thr Tyr Leu Gln Ala		
1540	1545	1550
Glu Gly Glu Asp Gly Gln Asn Leu Glu Lys Arg Arg Asn Leu Leu Asn		
1555	1560	1565
Cys Leu Ile Val Arg Ile Leu Lys Ala His Gly Asp Glu Gly Leu His		
1570	1575	1580
Ile Asp Gln Leu Val Cys Leu Val Leu Glu Ala Trp Gln Lys Gly Pro		
1585	1590	1595
Cys Pro Pro Arg Gly Leu Val Ser Ser Leu Gly Lys Gly Ser Ala Cys		
1605	1610	1615
Ser Ser Thr Asp Val Leu Ser Cys Ile Leu His Leu Leu Gly Lys Gly		
1620	1625	1630
Thr Leu Arg Arg His Asp Asp Arg Pro Gln Val Leu Ser Tyr Ala Val		
1635	1640	1645
Pro Val Thr Val Met Glu Pro His Thr Glu Ser Leu Asn Pro Gly Ser		
1650	1655	1660
Ser Gly Pro Asn Pro Pro Leu Thr Phe His Thr Leu Gln Ile Arg Ser		

1665 1670 1675 1680
Arg Gly Val Pro Tyr Ala Ser Cys Thr Ala Thr Gln Ser Phe Ser Thr
 1685 1690 1695
Phe Arg

1665 1670 1675 1680
Arg Gly Val Pro Tyr Ala Ser Cys Thr Ala Thr Gln Ser Phe Ser Thr
 1685 1690 1695
Phe Arg